Amendments to the Drawings

The attached replacement sheet of drawings includes changes to Fig. 6 and replaces the original sheet including Fig. 6.

In Figure 6, "PVK" is replaced with "CBP."

Attachments following last page of this Amendment:

Replacement Sheet (1 page)
Annotated Sheet Showing Change(s) (1 page)

REMARKS

Claims 1-3 and 5-27 are pending with claims 1-3 and 5-8 being independent. Claims 5-7 have been withdrawn, leaving claims 1-3 and 8-27 under consideration with claims 1-3 and 8 being independent. Claims 28-32 have been cancelled, and claim 8 has been amended. The specification and drawings also have been amended. The amendments are supported by the specification as originally filed. No new matter has been introduced.

Applicant acknowledges with appreciation the allowance of claims 1-3 and 9-27.

AMENDMENTS TO THE SPECIFICATION AND DRAWINGS

In the paragraph beginning on page 25, line 16, the electroluminescent layer in Figure 3 was incorrectly referred to with reference number 202. This paragraph has been amended to correctly refer to the electroluminescent layer in Figure 3 with reference number 302, as shown in Figure 3.

In the paragraph beginning on page 25, line 18, the light-emitting layer in Figure 3 was incorrectly referred to with reference number 313. This paragraph has been amended to correctly refer to the light-emitting layer in Figure 3 with reference number 311, as shown in Figure 3.

In the paragraph beginning on page 36, line 23, structural formula (15) was incorrectly identified as poly(n-vinyl carbazole) (PVK). The correct name for the molecule shown by structural formula (15) is 4,4'-bis(N-carbazolyl)-1,1'-biphenyl (CBP), as indicated by the product detail page for Product No. 660124 from Sigma-Aldrich (see Attachment 1). This paragraph, which refers to Figure 6, has been amended to correct the chemical name of structural formula (15) from PVK to CBP. This change has also been made in Figure 6, in which the host material incorrectly identified as "PVK" has been amended to correctly identify the host material as "CBP."

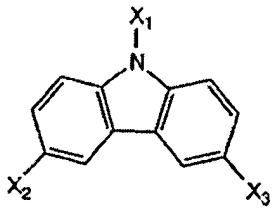
No new matter has been introduced by these amendments.

35 U.S.C. § 102 REJECTION OVER LAMANSKY

Claim 8 was rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent Application Publication No. 2004/0062947 to Lamansky. Applicant disagrees with this rejection.

Independent claim 8 has been amended to recite that "an electroluminescent layer provided between said pair of electrodes" includes "a host material and a guest material, wherein each of said host material and said guest material is a compound having a skeleton represented by the general formula 14:

Formula 14

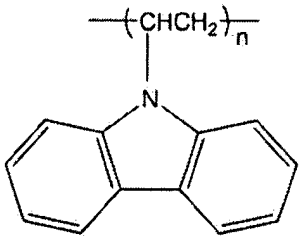


. . . (14)

wherein X_1 to X_3, each of which may be the same or different, are individually a hydrogen atom, a halogen atom, a lower alkyl group, an alkoxy group, an acyl group, a nitro group, a cyano group, an amino group, a dialkylamino group, a diarylamino group, a vinyl group which may have a substituent, an aryl group which may have a substituent, or a heterocyclic group which may have a substituent."

The Office Action states: "Lamansky et al. anticipates a device comprising a layer having PVK (polyvinylcarbazole) as a host and bis(carbazol-9-yl) biphenyl (CBP) as a guest material (see par. 191-192, page 20). Both carbazole-containing materials are within instant Formula (14) as currently defined." Office Action, at 3.

PVK, however, does not satisfy Formula 14 in claim 8. That is, Formula 14 is not a polymeric structure. As recited in claim 8, X_1 may be a "a hydrogen atom, a halogen atom, a lower alkyl group, an alkoxy group, an acyl group, a nitro group, a cyano group, an amino group, a dialkylamino group, a diarylamino group, a vinyl group which may have a substituent, an aryl group which may have a substituent, or a heterocyclic group which may have a substituent." PVK, shown below, does not satisfy any of these requirements for X_1.



In fact, for, PVK with an average molecular weight of ~1,100,000 (see Attachment 2), n in the above structure would be over 5,000, and X_1 would represent an alkyl chain including over 10,000 carbon atoms and over 5,000 additional pendant carbazolyl groups. This does not meet the definition of "lower alkyl" as defined in the paragraph beginning on page 14, line 5 of the application.

Accordingly, claim 8 is not anticipated by Lamansky, and applicant respectfully requests removal of the 35 U.S.C. § 102(e) rejection of claim 8 over Lamansky.

CONCLUSIONS

All claims in the application are now in condition for allowance.

Fees are being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 12732-0220001.

Respectfully submitted,

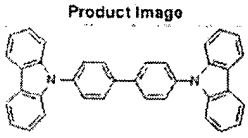
Date: February 11, 2009

Heather L. Flanagan, Ph.D.
Reg. No. 54,101

Fish & Richardson P.C.
One Congress Plaza
Suite 810
111 Congress Avenue
Austin, TX 78701
Telephone: (512) 472-5070
Facsimile: (512) 320-8935
11066633.doc

ATTACHMENT 1

Product Image



1 of 1

660124 4,4'-Bis(*N*-carbazolyl)-1,1'-biphenyl

Aldrich 97%

Price and Availability

Product Number	Your Price USD	Available to Ship	Quantity	Actions
660124-1G	44.60	02/06/2009 details		
660124-5G	154.00	02/06/2009 details		

Synonyms: 4,4'-Bis(9-carbazolyl)-1,1'-biphenyl, 4,4-*N*,*N*-Dicarbazole-1,1'-biphenyl, CBP, DCBP

CAS Number: 58328-31-7

Empirical Formula (Hill Notation): $C_{36}H_{24}N_2$

Molecular Weight: 484.59

MDL number: MFCD00053417

PubChem Substance ID: 24884461

Specifications Related Products References

Description

Application Hole-transport material in high-efficiency red OLEDs[1] and electroluminescent dendritic complexes.[2]

Packaging 1, 5 g in glass btl

Properties

assay 97%

mp 281-285 °C

Safety

Hazard Codes Xi

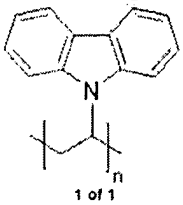
Risk Statements 37/38-41

Safety Statements 26-36/39

WGK Germany 3

ATTACHMENT 2

Product Image



1 of 1

182605 Poly(9-vinylcarbazole)

Aldrich average M_w ~1,100,000, powder

Price and Availability

Product Number	Your Price USD	Available to Ship	Quantity	Actions
182605-5G	75.00	02/06/2009 details		
182605-25G	250.00	02/06/2009 details		

Synonyms: PVK

CAS Number: 25067-59-8

MDL number: MFCD00134336

Specifications Related Products References

Description

Packaging 5, 25 g in glass btl

Properties

form	powder
mol wt	average M_w ~1,100,000
refractive index	n20/D 1.683
transition temp	T_g 220 °C
density	1.2 g/mL at 25 °C(lit.)

Safety

WGK Germany 2

RTECS FE6225480

Useful Links & Tools

MSDS
Specification Sheet
Certificate of Analysis
Enter Lot No Search
Certificate of Origin
Enter Lot No Search
Bulk Quote
FT-IR Condensed Phase
Similar Products
More...

Related Categories

- Organic Electronics and Photonics > OLED and PLED Materials > Polymer Hole Transport and Host Materials

Last 5 Products Viewed

- 182605 (Aldrich)
- 368350 (Aldrich)

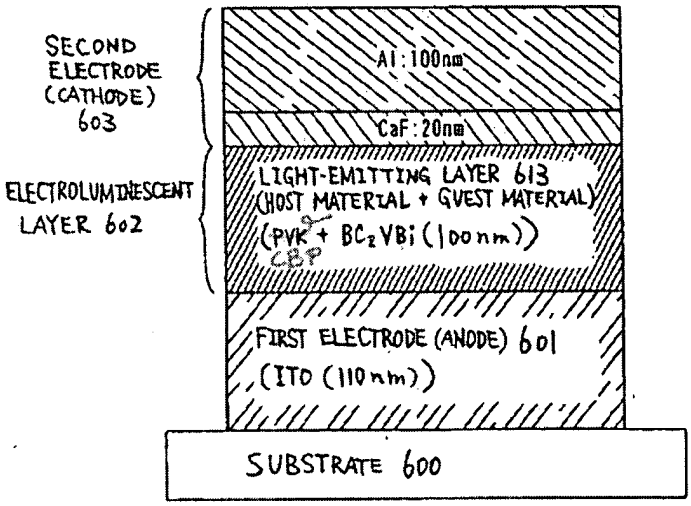

SECOND ELECTRODE (CATHODE) 603
ELECTROLUMINESCENT LAYER 602
Al: 100nm
CaF: 20nm
LIGHT-EMITTING LAYER 613
(HOST MATERIAL + GUEST MATERIAL)
(PVK + BC2VBi (100nm))
CBP
FIRST ELECTRODE (ANODE) 601
(ITO (110nm))
SUBSTRATE 600

FIG. 6